In the Claims:

Please *amend* claims 1, 3, 7-12, 14, 19-20, 22-23, 26-30, 35, 39, 42-43, 48-50, 56 and 58, and *add* new claims 59-74, as follows.

A1

1. (Amended) A method of making a set of labelled compounds, by the use of a support and a set of labels, [which] said method [comprises] comprising the steps of:

a) at least one first or intermediate step comprising dividing the support into lots, performing a different chemical reaction on each lot of the support so as either to modify that lot of the support or to couple a chemical moiety to that lot of the support, tagging a fraction of each lot of the support with a different label, and combining the said lots of the support, and

b) at least one intermediate or final step comprising dividing the support into lots, performing a different chemical reaction on each lot of the support, so as either to modify that lot of the support or to couple a chemical moiety to that lot of the support, tagging a fraction of each lot of the support with a different cleavable label, whereby each different cleavable label is linked to a chemical moiety coupled to the support in a different step and forms with that chemical moiety a labelled compound which is separable from the support, and combining the said lots of the support.

SUB B2

A2

3. (Amended) The method of claim 1 [or claim 2], wherein step b) is performed to couple the chemical moiety to a chemical moiety previously coupled to the support.

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7. (Amended) The method of claim 1 [any one of claims 1 to 6], wherein each labelled compound comprises a single label and at least one chemical moiety.

SUB B3

8. (Amended) The method of claim 1 [any one of claims 1 to 7], wherein the support is treated to release the said labelled compounds into solution.

9. (Amended) The method of claim 1 [any one of claims 1 to 8], wherein from 0.25% to 25% of each lot of the support is tagged in each step with a different label.

10. (Amended) The method of claim 1 [any one of claims 1 to 9], wherein the support has cleavable linkers, wherein each cleavable linker has at least one group for chemical synthesis and another group for labelling.

11. (Amended) The method of claim 1 [any one of claims 1 to 10], wherein the label is cleaved to give a charged species for mass spectrometry.

12. (Amended) The method of claim 1 [any one of claims 1 to 11], wherein each label is a group of formula $R^1R^2R^3C$-, where R^1, R^2 and R^3 are the same or different and each is a monocyclic or fused ring aromatic group that is substituted or unsubstituted.

14. (Amended) The method of claim 1 [any one of claims 1 to 13], wherein the labelled compounds are labelled oligonucleotides.

19. (Amended) The set of claim 15 [any one of claims 15 to 18], wherein the label is cleaved to give a charged species for mass spectrometry.

20. (Amended) The set of claim 15 [any one of claims 15 to 19], wherein each label is a group of formula $R^1R^2R^3C$-, where R^1, R^2 and R^3 are the same or different and each is a monocyclic or fused ring aromatic group that is substituted or unsubstituted

22. (Amended) The set of claim 15 [any one of claims 15 to 21], wherein the labelled compounds are labelled oligonucleotides.

SUB B6 cont. A6 cont'd

23. (Amended) A library consisting of the set of labelled compounds of claim 19 [a plurality of the sets of any one of claims 19 to 22].

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26. (Amended) The reagent as claimed in claim 24 [or claim 25], wherein the label is joined by a link that is photocleavable to give a charged species for mass spectrometry.

27. (Amended) The reagent of claim 24 [any one of claims 24 to 26], wherein each label is a group of formula $R^1R^2R^3C$-, where R^1, R^2 and R^3 are the same or different and each is a monocyclic or fused ring aromatic group that is substituted or unsubstituted.

28. (Amended) The reagent of claim 24 [any one of claims 24 to 27], wherein at least one of R^1, R^2 and R^3 carries a substituent selected from C^1-C^{20} alkoxy or hydrocarbyl either unsubstituted or substituted by carboxylic acid, sulphonic acid, nitro, cyano, hydroxyl, thiol, primary, secondary or tertiary amino, primary or secondary amido, anhydride, carbonyl halide or active ester.

29. (Amended) The reagent of claim 24 [any one of claims 24 to 28], wherein the oligomers are oligonucleotides.

30. (Amended) A library consisting of a plurality of the reagents of [any one of claims 24 to 29] claim 24.

A8

35. (Amended) The method of claim 31 [any one of claims 31 to 34], wherein the label is a group of formula $R^1R^2R^3C$-, where R^1, R^2 and R^3 are the same or different and each is a monocyclic or fused ring aromatic group that is substituted or unsubstituted.

A9

39. (Amended) The library of claim 37 [or claim 38], wherein each label is a group of formula $R^1R^2R^3C$-, where R^1, R^2 and R^3 are the same or different and each is a monocyclic or fused ring aromatic group that is substituted or unsubstituted.

A10

42. (Amended) The method of claim 12 [any one of claims 12, 13, 35 and 36], wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

43. (Amended) The set of claim 20 [claims 20 or 21, or the reagent of claim 27 or 28, or the library of claims 41 or 42], wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

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48. (Amended) The insert of claim 46 [or 47], wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

49. (Amended) The insert of claim 45 [any one of claims 45 to 48], wherein the target surface carries an array of immobilised compounds for analysis.

50. (Amended) The insert of claim 45 [anyone of claims 45 to 49], wherein compounds are immobilised on target surfaces of glass by means of epoxysilane chemistry or isothiocyanate chemistry or mercaptosilane chemistry or polylysine.

A12

56. (Amended) The method of claim 31 [any one of claims 31 to 36], wherein 4s different labels are used, where the labelled oligonucleotide or nucleic acid contains s bases and each label is indicative of the position and identity of a nucleotide residue of the labelled oligonucleotide or nucleic acid.

A13

58. (Amended) The method of claim 31 [any one of claims 31 to 36], wherein each possible oligonucleotide or nucleic acid containing s bases is compared in turn against a mass spectrum comprising the s different tag regions, to identify the oligonucleotide having the best fit.

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59. (New) The method of claim 13, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

60. (New) The method of claim 35, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

61. (New) The method of claim 36, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

62. (New) The set of claim 21, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

63. (New) The reagent of claim 27, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

64. (New) The reagent of claim 28, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

65. (New) The compound of claim 41, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

66. (New) The compound of claim 42, wherein $R^1R^2R^3C$- is a substituted monomethoxytrityl group.

67. (New) A library consisting of the set of labelled compounds of claim 20.

68. (New) A library consisting of the set of labelled compounds of claim 21.

69. (New) A library consisting of the set of labelled compounds of claim 22.

70. (New) A library consisting of a plurality of the reagents of claim 25.

71. (New) A library consisting of a plurality of the reagents of claim 26.